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EXAMINER

COLBERT, ELLA

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 02/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

NM

Office Action Summary

Application No.

09/073,748

Applicant(s)

WEISSMAN ET AL.

Examiner

Ella Colbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 88-156 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 88-156 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Claims 88-132 and newly added claims 133-156 are pending in this communication. Claims 90, 93, 100, 107, 116, 123, and 129 have been amended in this communication filed 10/31/01, entered as Amendment D, paper number 13.
2. Applicants' objection to the Specification has been overcome by the amendment to the Specification removing the table of contents on pages 8-9. The objection is hereby withdrawn.
3. Applicants' amendment to the claim objections to claims 90, 100, 107, 116, 123, and 129 has been overcome and is hereby withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 88-90, 105-107, and 121-123 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,675,785) Hall et al, hereafter Hall.

With respect to claim 88, accessing at least one description wherein the description describes a database system (col. 1, lines 38-52, col. 3, lines 52-56, and col. 5, lines 18-42), populating a metadata schema with the description (col. 6, lines 13-26 and lines 52-61), automatically generating the database system according to the populated metadata schema (col. 3, lines 57-67 and col. 4, lines 1-2), and using the database system according to the populated metadata schema (col. 4, lines 3-15). Hall

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did not explicitly teach populating a metadata schema with the description but it would have been obvious to one having ordinary skill in the art at the time the invention was made to populate the metadata schema with a description and to incorporate in Hall because such a modification would enhance Hall's fact and reference tables which contain the attributes of the entries in the fact table which are typically linked to the reference tables through one or more keyed columns containing code.

With respect to claim 89, automatically generating an actual table schema for the database system according to the populated metadata schema (col. 4, lines 37-46 and fig. 2 (11-15) and automatically populating the actual table schema with the data (col. 5, lines 66-67 and col. 6, lines 1-8).

With respect to claim 90, automatically generating one or more aggregates according to the populated metadata schema (col. 6, lines 12-18 and lines 62-67 and col. 7, line 1 and lines 45-49) and automatically generating one or more query mechanisms according to the populated metadata schema (col. 7, lines 1-4 and lines 10-67 and col. 8, lines 1-9).

With respect to claim 105, this independent claim is rejected for the similar rationale given for claim 88.

With respect to claim 106, this independent claim is rejected for the similar rationale given for claim 89.

With respect to claim 107, this independent claim is rejected for the similar rationale given for claim 90.

With respect to claim 121, this independent claim is rejected for the similar rationale given for claim 105.

With respect to claim 122, this independent claim is rejected for the similar rationale given for claim 106.

With respect to claim 123, this independent claim is rejected for the similar rationale given for claim 107.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

7. Claims 91-104, 108-120, and 124-132 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of (US 5,721,903) Anand et al, hereafter Anand.

With respect to claim 91, Hall did not teach, querying the database system and generating one or more reports with the database system. Anand teaches, querying the database system (col. 1, lines 38-46) and generating one or more reports with the database system (col. 1, lines 48-63 and col. 2, lines 1-9). It would have been obvious to one having ordinary skill in the art at the time the invention was made to query a database system and to generate one or more reports with the database system and to incorporate Hall's accessing a description with Anand's querying a database system to generate one or more reports because such a modification would allow a more efficient means of data retrieval and analyzation of data without requiring the user to have an knowledge of underlying data structures.

With respect to claim 92, Hall did not teach, querying the database system in response to a query request received from one or more client computers over a computer network, sending the results of the querying to one or more of the client

computers, generating the reports in response to a report request received from one or more of the client computers over a computer network, and sending the results of the report generating to one or more of the client computers. Anand teaches, querying the database system in response to a query request received from one or more client computers over a computer network (col. 5, lines 50-67 and col. 6, lines 1-12), sending the results of the querying to one or more of the client computers (col. 11, lines 33-36), generating the reports in response to a report request received from one or more of the client computers over a computer network (col. 11, lines 35-41), and sending the results of the report generating to one or more of the client computers (col. 11, lines 42-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to query the database system in response to a query request received from one or more client computers over a computer network, send the results of the query to one or more of the client computers, generate the reports in response to a report request received from one or more of the client computers over a computer network, and send the results of the report generation to one or more of the client computers and to incorporate Hall's metadata schema with Anand's querying the database system, sending the results of the query to one or more client computers, generating the reports in response to a report request, and sending the results of the report generation because such a modification would enhance the ability of a user to more efficiently retrieve data and to analyze the data prior to sending it to the client computers (computers that access shared network resources provided by another computer called a server).

With respect to claim 93, Hall did not explicitly teach, automatically extracting data from one or more source databases according to the populated metadata schema, and automatically populating the database system with the data according to the

populated metadata schema. Anand teaches, automatically extracting data from one or more source databases according to the populated metadata schema (col. 3, lines 59-62 and col. 4, lines 24-29), and automatically populating the database system with the data according to the populated metadata schema (col. 4, lines 38-45 and col. 10, lines 30-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically extract data from one or more source databases according to the populated metadata schema and automatically populate the database system with the data according to the populated metadata schema and to incorporate Hall's metadata schema with Anand's automatically extracted data from one or more source databases according to the populated metadata schema and to automatically populate the database system with the data according to the populated metadata schema because such a modification would give the ability to of the system to execute the request of events that involve a warehouse request in which the data from a source database is extracted, transferred, transformed, and loaded into a target database. The source database represents all of the data sources from which data will be extracted to populate the metadata schema and the data warehouse or data mart.

With respect to claim 94, Hall did not explicitly teach, automatically populating the database system includes automatically converting the data into one or more data formats according to the populated metadata schema. Anand teaches, automatically populating the database system including automatically converting the data into one or more data formats according to the populated metadata schema (col. 1, lines 28-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically populate the database system including automatically converting the data into one or more data formats according to the populated metadata schema and to incorporate Hall's use of the database system to populate the metadata

schema with Anand's automatically populating the database system including automatically converting the data into one or more data formats according to the populated metadata schema because such a modification would allow Hall's system the ability to provide for translating graphical user interface requests, manipulate data views, have rules for selecting default parameters for converting the data, and choose layout and display formats for generating the text data for the reports.

With respect to claim 95, Hall nor Anand did not teach, receiving the description from a client computer over a network, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to receive the description from a client computer over a network because the client computer has the ability to access shared network resources provided by another computer called a server in a network or Internet environment.

With respect to claim 96, Hall did not explicitly teach, accessing a modified description wherein the modified description includes the description and one or more modifications to the description, re-populating the metadata schema with the modified description, automatically modifying the database system according to the re-populated metadata schema, and using the database system according to the re-populated metadata schema. Anand teaches, accessing a modified description wherein the modified description includes the description and one or more modifications to the description (col. 8, lines 14-23), re-populating the metadata schema with the modified description, automatically modifying the database system according to the re-populated metadata schema (col. 8, lines 24-67), and using the database system according to the re-populated metadata schema (col. 13, lines 21-34). It would have been obvious to one having ordinary skill in the art at the time the invention was made to access a modified description wherein the modified description includes the description and one or more

modifications to the description, re-populating the metadata schema with the modified description, automatically modifying the database system according to the re-populated metadata schema, and using the database system according to the re-populated metadata schema and to incorporate Hall's accessing a description of a database system with Anand's access a modified description wherein the modified description includes the description and one or more modifications to the description, re-populating the metadata schema with the modified description, automatically modifying the database system according to the re-populated metadata schema, and using the database system according to the re-populated metadata schema because such a modification would because such a modification would give the ability to of the system to execute the request of events that involve a warehouse request in which the data from a source database is extracted, transferred, transformed, and loaded into a target database. The database system represents all of the data sources from which data will be extracted to populate and to re-populate the metadata schema and to re-populate the meta schema and the data warehouse or data mart.

With respect to claim 97, Hall nor Anand did not teach, the data in the database system is not lost during the modification, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the data in the database system not lost during modification because the client system is capable of handling several kinds of user modifications and updates and the user has the ability to save the data before and after modification by the use of a storage medium.

With respect to claim 98, Hall did not explicitly teach, automatically extracting data from one or more source databases according to the re-populated metadata schema, automatically converting data into one or more source modified data formats according to the re-populated metadata schema, and automatically populating the

database system with the data according to the populated metadata schema. Anand teaches, automatically extracting data from one or more source databases according to the re-populated metadata schema (col. 2, lines 30-32), automatically converting data into one or more source modified data formats according to the re-populated metadata schema (col. 14, lines 35-40), and automatically populating the database system with the data according to the populated metadata schema (col. 4, lines 38-45 and col. 10, 30-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically extract data from one or more source databases according to the re-populated metadata schema, automatically convert the data to one or more modified data formats according to the re-populated metadata schema and automatically populate the database system with the data according to the populated metadata schema and to incorporate Hall's metadata schema with Anand's automatically extracted data from one or more source databases according to the re-populated metadata schema, automatically convert the data to one or more modified data formats according to the re-populated metadata schema, and to automatically populate the database system with the data according to the populated metadata schema because such a modification would give the system the ability to execute the request of events that involve a warehouse request in which the data from a source database is extracted, transferred, transformed, and loaded into a target database. The source database represents all of the data sources from which data will be extracted to populate the metadata schema and the data warehouse or data mart.

With respect to claim 99, Hall nor Anand did not teach, automatically modifying the actual table schema for the database system according to the re-populated metadata schema, and automatically populating the modified actual table schema with the data, but it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the actual table schema for the database system according to the re-populated metadata schema and to populate the modified actual table schema with the data because such a modification would give the system the ability to execute the request of events that involve a warehouse request in which the data from a source database is extracted, transferred, transformed, and loaded into a target database.

With respect to claim 100, Hall did not explicitly teach, automatically modifying one or more aggregates according to the re-populated metadata schema and automatically modifying one or more query mechanisms according to the re-populated metadata schema. Anand teaches, automatically modifying one or more aggregates according to the re-populated metadata schema (col. 15, lines 15-31) and automatically modifying one or more query mechanisms according to the re-populated metadata schema (col. 15, lines 1-14). It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically modifying one or more aggregates according to the re-populated metadata schema and automatically modify one or more query mechanisms according to the re-populated metadata schema and Hall's generation of one or more aggregates with Anand's modification of one or more aggregates according to the re-populated meta schema and modifying one or more query mechanisms according to the re-populated metadata schema because such a modification would enhance Anand's system's ability to include structured query language aggregates and functions to provide various statistics and to execute the request of events that involve querying a database to extract and to re-populate the data in a data warehouse or data mart.

With respect to claim 101, Hall did not explicitly teach, automatically modifying the actual table schema includes modifying one or more tables in the actual table

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schema. Anand teaches, automatically modifying the actual table schema includes modifying one or more tables in the actual table schema (col. 2, col. 36-38 and col. 4, lines 30-33 and lines 42-45). It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically modify the actual table schema including modifying one or more tables in the actual table schema and to incorporate Hall's automatically extracting data with Anand's automatically modifying the actual table schema including modifying one or more tables because such a modification would further expand the usage of Anand's system and make the schema more efficient.

With respect to claim 102, Hall nor Anand did not teach, adding one or more of the tables, deleting one or more of the tables, adding one or more of the columns to the tables, and deleting one or more of the columns from the tables, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to add one or more tables, delete one or more tables, add one or more column to the tables, and delete one or more of the columns from the tables because this is well known in the art of relational databases with tables. It is well known in the art that a relational database stores information in tables, rows and columns of data and conducts searches by using data in specified columns of one table to find additional data in another table. The rows of data and the columns represent fields and these match the data from one field in one table with the data in a corresponding field of another table to produce a third table that combines requested data from both tables.

With respect to claim 103, Hall nor Anand explicitly teaches, the tables include any of the following: one or more fact tables, one or more dimension tables, or one or more aggregate tables. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the tables include fact tables, dimension

tables, and aggregate tables in view of Hall's teachings of summarized fact tables and aggregates in col. 1, lines 47-50 and col. 2, lines 12-15 and Anand teaches, dimensions in col. 15, lines 1-45 because together Hall and Anand teach, one or more fact tables, dimensions, and aggregates and these tables meet several needs such as the need for higher performance on many queries since the tables are structured closer to the end users needs.

With respect to claim 104, Hall nor Anand explicitly teaches, wherein automatically modifying the database system further includes modifying one or more indices in the database system, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the database system to include modifying one or more indices in the database system because an index is simply a listing of keywords and associated data that point to the location of more comprehensive information, such as files and records on a disk or record keys in a database and requires modifying occasionally.

With respect to claim 108, this independent claim is rejected for the similar rationale given for claim 91.

With respect to claim 109, this independent claim is rejected for the similar rationale given for claim 92.

With respect to claim 110, this independent claim is rejected for the similar rationale given for claim 93.

With respect to claim 111, this independent claim is rejected for the similar rationale given for claim 94.

With respect to claim 112, this independent claim is rejected for the similar rationale given for claim 95.

With respect to claim 113, this independent claim is rejected for the similar rationale given for claim 96.

With respect to claim 114, this independent claim is rejected for the similar rationale given for claim 98.

With respect to claim 115, this independent claim is rejected for the similar rationale given for claim 99.

With respect to claim 116, this independent claim is rejected for the similar rationale given for claim 100.

With respect to claim 117, this independent claim is rejected for the similar rationale given for claim 101.

With respect to claim 118, this independent claim is rejected for the similar rationale given for claim 102.

With respect to claim 119, this independent claim is rejected for the similar rationale given for claim 103.

With respect to claim 120, this independent claim is rejected for the similar rationale given for claim 104.

With respect to claim 124, this independent claim is rejected for the similar rationale given for claim 108.

With respect to claim 125, this independent claim is rejected for the similar rationale given for claim 113.

With respect to claim 126, this independent claim is rejected for the similar rationale given for claim 97.

With respect to claim 127, this independent claim is rejected for the similar rationale given for claim 114.

With respect to claim 128, this independent claim is rejected for the similar rationale given for claim 115.

With respect to claim 129, this independent claim is rejected for the similar rationale given for claim 116.

With respect to claim 130, this independent claim is rejected for the similar rationale given for claim 117.

With respect to claim 131, this independent claim is rejected for the similar rationale given for claim 118.

With respect to claim 132, this independent claim is rejected for the similar rationale given for claim 120.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 133-156 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,721,903) Anand et al, hereafter Anand.

With respect to claims 133, 141, and 149, Anand teaches, providing a metadata system that includes a metadata schema, a facility for entering instructions into the metadata schema, and a facility for manipulating the metadata schema (col. 1, lines 5-19 and lines 38-46, col. 3, lines 59-62, and col. 15, lines 44-48); receiving instructions from a user, the instructions are entered into the metadata schema and are used to create a business database system (col. 1, lines 27-62, col. 2, lines 1-16, and col. 4, lines 4-12 and lines 23-28); automatically generating the business database system

according to the instructions contained in the metadata schema such that the business database system is well-formed (col. 4, lines 29-50); loading data into the business database system according to the instructions contained in the metadata schema (col. 5, lines 20-34, col. 9, lines 47-59, and col. 11, lines 41-55); and operating on the business database system according to the instructions contained in the metadata schema (col. 6, lines 12-23, col. 10, lines 30-65, and col. 11, lines 41-55). Anand did not explicitly teach a business database system but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a business database and to modify it in view of his teachings of a data warehouse because such a modification would allow Anand to store large amounts of transaction-level data for later analysis and to have the ability to seek a competitive edge in business.

With respect to claim 141, Anand teaches, a computer (col. 2, lines 21-25) a processor (col. 5, lines 64-67 and col. 6, lines 1-4), and a computer program stored in memory and executed by the processor including the computer program with instructions (col. 5, lines 50-62).

With respect to claim 149, Anand teaches, a computer readable storage medium encoded with software instructions (col. 5, lines 60-62).

With respect to claims 134, 142, and 150, Anand teaches, automatically generating tables according to the instructions (col. 11, lines 28-40).

With respect to claims 135, 143, and 151, Anand teaches, extracting data from sources specified in the instructions (col. 11, lines 28-40); loading the data into staging tables (col. 10, lines 30-37, col. 11, lines 17-31 and lines 45-55, and col. 14, lines 36-39); and loading the data from the staging tables into the business database system based on semantic definitions provided in the instructions (col. 4, lines 60-67 and col. 9, lines 29-37). Anand did not explicitly teach staging tables but it would have been

obvious to one having ordinary skill in the art at the time the invention was made to have staging tables and to modify in Anand and in view of Anand's teaching of relational tables in the data warehouse and because such a modification would allow Anand to map some company specific information to a customer's data warehouse and to store the information in a set of relational tables.

With respect to claims 136, 144, and 152, Anand teaches, building aggregate tables according to the instructions (col. 15, lines 34-55).

With respect to claims 137, 145, and 153, Anand teaches, receiving further instructions from a user to define a query mechanism (col. 11, lines 34-55) and generating queries according to the further instructions (col. 13, lines 33-67 and col. 14, lines 40-49).

With respect to claims 138, 146, and 154, Anand teaches, generating reports according to the instructions (col. 14, lines 55-67 and col. 15, lines 1-14).

With respect to claims 139, 147, and 155, Anand teaches, receiving a modification of the metadata schema (col. 2, lines 1-9) and automatically adjusting the business database system according to the modification (col. 2, lines 9-16, col. 3, lines 48-55, and col. 9, lines 60-65).

With respect to claims 140, 148, and 156, Anand teaches, the instructions provide semantic definitions (col. 10, lines 30-37) and the business database system is automatically generated using the semantic definitions such that the business database system is well-formed (col. 17, lines 6-27 and col. 18, lines 38-61).

Response to Arguments

11. Applicant's arguments filed 10/31/01 have been fully considered but they are not persuasive.

Applicants' argue: the Hall patent does not teach or suggest "accessing at least one description describes a database system" has been considered but is not persuasive because a database system is interpreted as being taught by Hall in col. 1, lines 38-52, col. 3, lines 52-62, and col. 5, lines 18-42 (... database warehouse is presented. The database warehouse includes a database ... A warehouse database ... connected to the database"). A database is well known in the art and defined as a collection of data stored on a computer storage medium such as a disk, that can be used for more than one purpose.

Applicants' argue: the Hall patent mentions a schema, but does not teach or suggest the metadata schema claimed by Applicants' has been considered but is not persuasive because Hall did not explicitly teach populating a metadata schema in col. 6, lines 13-26 and lines 52-61 but Hall does teach "... provides a schema ... summaries are populated. Intelligent warehouse ... tables. Metadata schemas, datamarts, and tables are well known in the art. Metadata is data that defines data, datamarts are referred to as data warehouses which are another type of database, and tables are an arrangement of data in a database where each row defines a relationship between items in that row.

Hall did not explicitly teach populating a metadata schema with the description but it would have been obvious to one having ordinary skill in the art at the time the invention was made to populate the metadata schema with a description and to incorporate in Hall because such a modification would enhance Hall's fact and reference tables which contain the attributes of the entries in the fact table which are

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typically linked to the reference tables through one or more keyed columns containing code.

Applicants' argue: the Hall patent does not teach or suggest the metadata schema of Applicants' invention, the Hall patent cannot teach or suggest automatically generating the database system according to the populated metadata schema has been considered but is not persuasive because Hall is interpreted as teaching a database, a schema, and populating the warehouse as discussed above in paragraph two.

Applicants' argue: the Hall patent does not teach or suggest Applicants' generating aggregates according to a populated metadata schema or automatically generating one or more query mechanisms according to the populated metadata schema has been considered but is not persuasive because Hall is interpreted as teaching a schema and aggregations in col. 6, lines 12-18 and lines 62-67 and col. 7, line 1.

Applicants' argue: combining the Hall and the Anand patent does not result in Applicants' claimed database system that is generated according to a populated metadata schema has been considered but is not persuasive because Hall teaches a database (col. 5, lines 18-42), populating a schema (col. 6, lines 15-18) and metadata (col. 7, lines 45-49). Anand teaches a database (col. 1, lines 38-40) and a populated metadata schema (col. 7, lines 16-25). Together Hall and Anand are interpreted as teaching a database system that is generated according to a populated metadata schema.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Papiernaik et al (US 6,128,624) taught a data warehouse, metadata, data retrieval, and an Internet-based service business.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ms. Ella Colbert whose telephone number is (703) 308-7064. The Examiner can normally be reached Monday through Thursday from 6:30 a.m. to 3:00 p.m. EST. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kim Vu, can be reached on (703)305-4393.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Art Unit: 2172

Or faxed to:

(703)746-7238 for After-Final Communications **Or** (703)746-7239 for Official Communications

Or:

(703)746-7240 for Non-Official Communications. Please label

"PROPOSED" or "DRAFT".

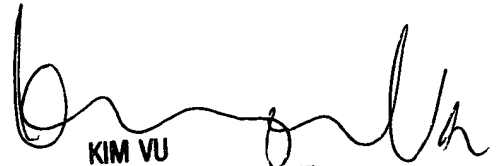
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, Virginia., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703)305-3900.



E. Colbert

February 24, 2002



KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100